

SGCN and Habitat Stressors

Level 1 Threat Biological Resource Use

Level 2 Threat: Fishing and Harvesting of Aquatic Resources

Description: Harvesting aquatic wild animals or plants for commercial, recreation, subsistence, research, or cultural purposes, or for control/persecution reasons; includes accidental mortality/bycatch

Species Associated With This Stressor: **Total SGCN: 1: 21 2: 48 3:**

Class	<i>Actinopterygii</i> (Ray-finned Fishes)	SGCN Category
Species: <i>Alosa pseudoharengus</i> (Alewife)		2
Severity: Moderate Severity	Actionability: Moderately actionable	
Notes: Extraction and mortality rates differ widely among Maine runs. Implementing voluntary conservation measures, such as continuous escapement or not fishing the run during the first week, can help ensure sustainable harvests		
Species: <i>Anguilla rostrata</i> (American Eel)		2
Severity: Moderate Severity	Actionability: Moderately actionable	
Notes: Commercial and Recreational harvest can be effectively regulated or minimized, however timescale of effect on adult spawning populations is long		
Species: <i>Alosa sapidissima</i> (American Shad)		1
Severity: Moderate Severity	Actionability: Moderately actionable	
Notes: Extraction and mortality rates differ widely among Maine runs. Implementing voluntary conservation measures, such as continuous escapement or not fishing the run during the first week, can help ensure sustainable harvests		
Species: <i>Thunnus thynnus</i> (Atlantic Bluefin Tuna)		2
Severity: Severe	Actionability: Moderately actionable	
Notes: While fishing mortality in the Western Atlantic has been effectively reduced based on TACs and other measures, fishing mortality continues to be very high in the Eastern Atlantic. The species is also susceptible as bycatch in longlining and other pelagic fishing.		
Species: <i>Gadus morhua</i> (Atlantic Cod)		1
Severity: Moderate Severity	Actionability: Moderately actionable	
Notes: Historic heavy fishing pressure has drastically reduced Atlantic cod stocks in the Gulf of Maine and Maine waters. Past fishing on spawning aggregations likely extirpated local populations. While there are current regulatory measures in place that severely limit cod fishing and the landing of cod, the stocks may be too far reduced to recover, and further limits on catch may have minimal impact.		
Species: <i>Acipenser oxyrinchus</i> (Atlantic Sturgeon)		1
Severity: Moderate Severity	Actionability: Moderately actionable	
Notes: While no directed fishing is allowed, some bycatch occurs and can be fatal (especially in trawler fleets).		
Species: <i>Anarhichas lupus</i> (Atlantic Wolffish)		2
Severity: Moderate Severity	Actionability: Moderately actionable	
Notes: Commercial fishing for, landing, or take of Atlantic wolffish is not permitted in Maine waters, but some bycatch likely occurs. Wolffish are caught in lobster traps and can be released live if handled properly.		
Species: <i>Alosa aestivalis</i> (Blueback Herring)		1
Severity: Moderate Severity	Actionability: Moderately actionable	
Notes: Extraction and mortality rates differ widely among Maine runs. Implementing voluntary conservation measures, such as continuous escapement or not fishing the run during the first week, can help ensure sustainable harvests		

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Class	<i>Actinopterygii</i> (Ray-finned Fishes)	SGCN Category
Species: <i>Brosme brosme</i> (Cusk)		2
Severity: Moderate Severity	Actionability: Moderately actionable	
Notes: Historic heavy fishing pressure has drastically reduced cusk stocks in the Gulf of Maine and Maine waters. There are currently no regulatory measures in place to limit commercial cusk take, however, annual landings are small and few fishermen report landings.		
Species: <i>Melanogrammus aeglefinus</i> (Haddock)		1
Severity: Moderate Severity	Actionability: Moderately actionable	
Notes: Historic heavy fishing pressure has drastically reduced haddock stocks in the Gulf of Maine and Maine waters. While there are current regulatory measures in place that limit haddock fishing, recent stock assessments for the Gulf of Maine found that the stocks may be recovering and that overfishing is not occurring		
Species: <i>Osmerus mordax</i> (Rainbow Smelt)		1
Severity: Moderate Severity	Actionability: Highly actionable	
Notes: Extraction and mortality rates differ widely among Maine runs. Implementing voluntary conservation measures, such as continuous escapement or not fishing the run during the first week, can help ensure sustainable harvests		
Species: <i>Acipenser brevirostrum</i> (Shortnose Sturgeon)		1
Severity: Moderate Severity	Actionability: Actionable with difficulty	
Notes: Directed fishing is prohibited but some bycatch occurs and can lead to mortality especially in trawl nets.		
Species: <i>Morone saxatilis</i> (Striped Bass)		2
Severity: Moderate Severity	Actionability: Moderately actionable	
Notes: Extraction rates may be low in some cases but mortality rates are high in some populations. Regulations can be implemented to close fisheries and effect is measurable within 2-3 generations of the population, but may be difficult to implement.		
Species: <i>Pseudopleuronectes americanus</i> (Winter Flounder)		2
Severity: Moderate Severity	Actionability: Moderately actionable	
Notes: Historic heavy fishing pressure has drastically reduced haddock stocks in the Gulf of Maine and Maine waters. While there are current regulatory measures in place that limit haddock fishing, recent stock assessments for the Gulf of Maine found that the stocks may be recovering and that overfishing is not occurring		
Class	<i>Anthozoa</i> (Corals, Sea Pens, Sea Fans, Sea Anemones)	SGCN Category
Species: <i>Gersemia rubiformis</i> (Sea Strawberry)		2
Severity: Severe	Actionability: Highly actionable	
Notes: Unintentional catch by commercial bottom trawling reduces population size and subsequently results in local extinctions facilitated by low growth rates, impaired role of the functional group "suspension feeders".		
Class	<i>Astroidea</i> (Sea Stars)	SGCN Category
Species: <i>Asterias rubens</i> (Common Sea Star)		2
Severity: Moderate Severity	Actionability: Moderately actionable	
Notes: Unintentional by-catch by commercial bottom trawling reduces this top predator population and subsequently results in decreased benthic diversity through trophic cascades and thus decreases the availability of food for other species		

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Class	<i>Asteroidea</i> (Sea Stars)	SGCN Category
Species: <i>Crossaster papposus</i> (Common Sun Star)		2
Severity: Moderate Severity	Actionability: Moderately actionable	
Notes: Large-scale, unintentional by-catch of commercial bottom trawling reduces this top predator population and subsequently results in decreased benthic diversity through trophic cascades and thus decreases the availability of food for other species. Likelihood is high (high certainty) and large-scale (throughout the region), so actionability is low, but moderate in new areas for developing bottom trawl fisheries.		
Species: <i>Asterias forbesi</i> (Forbes's Starfish)		2
Severity: Moderate Severity	Actionability: Moderately actionable	
Notes: Unintentional by-catch by commercial bottom trawling reduces this top predator population and subsequently results in decreased benthic diversity through trophic cascades and thus decreases the availability of food for other species.		
Species: <i>Solaster endeca</i> (Purple Sunstar)		2
Severity: Moderate Severity	Actionability: Moderately actionable	
Notes: Large-scale, unintentional by-catch of commercial bottom trawling reduces this top predator population and subsequently results in decreased benthic diversity through trophic cascades and thus decreases the availability of food for other species. Likelihood is high (high certainty) and large-scale (throughout the region), so actionability is low, but moderate in new areas for developing bottom trawl fisheries.		
Species: <i>Stephanasterias albula</i> (White Sea Star)		2
Severity: Moderate Severity	Actionability: Moderately actionable	
Notes: Unintentional by-catch by commercial bottom trawling reduces this top predator population and subsequently results in decreased benthic diversity through trophic cascades and thus decreases the availability of food for other species.		
Class	<i>Aves</i> (Birds)	SGCN Category
Species: <i>Sterna paradisaea</i> (Arctic Tern)		1
Severity: Moderate Severity	Actionability: Actionable with difficulty	
Notes: Competition for prey items by commercial fishermen and disturbance		
Species: <i>Fratercula arctica</i> (Atlantic Puffin)		2
Severity: Moderate Severity	Actionability: Actionable with difficulty	
Notes: Prey base is highly sought after by commercial fishing industry and fishing related disturbance		
Species: <i>Sterna hirundo</i> (Common Tern)		2
Severity: Moderate Severity	Actionability: Actionable with difficulty	
Notes: Prey availability issues as many important foods are commercial valuable fish resources and disturbance associated with these activities		
Species: <i>Phalacrocorax carbo</i> (Great Cormorant)		1
Severity: Moderate Severity	Actionability: Moderately actionable	
Notes: Competition with commercial interests for prey items and disturbance		
Species: <i>Histrionicus histrionicus</i> (Harlequin Duck)		1
Severity: Moderate Severity	Actionability: Highly actionable	
Notes: Activities can alter habitat and behavior		
Species: <i>Calidris maritima</i> (Purple Sandpiper)		1
Severity: Moderate Severity	Actionability: Highly actionable	
Notes: Activities can alter habitat and behavior		

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Class	Aves (Birds)	SGCN Category
	Species: <i>Alca torda</i> (Razorbill) Severity: Moderate Severity Actionability: Actionable with difficulty Notes: Competition for important prey items by commercial fisheries and fishing related disturbances	2
	Species: <i>Calidris canutus rufa</i> (Red Knot) Severity: Moderate Severity Actionability: Highly actionable Notes: Activities in the intertidal areas can impact habitat and behavior.	1
	Species: <i>Sterna dougallii</i> (Roseate Tern) Severity: Moderate Severity Actionability: Moderately actionable Notes: Prey availability issues as many important foods are also commercially valuable and overfishing of these stocks becomes an issue; and disturbance associated with these fishing activities	1
	Species: <i>Arenaria interpres</i> (Ruddy Turnstone) Severity: Moderate Severity Actionability: Highly actionable Notes: Activities in the intertidal areas can impact habitat and behavior.	2
	Species: <i>Calidris alba</i> (Sanderling) Severity: Moderate Severity Actionability: Highly actionable Notes: Habitat degradation from macroalgae harvest may be minimized through area closure and environmental permit review process.	2
	Species: <i>Calidris pusilla</i> (Semipalmated Sandpiper) Severity: Moderate Severity Actionability: Moderately actionable Notes: Activities in the intertidal areas can impact habitat and behavior	2
	Species: <i>Numenius phaeopus</i> (Whimbrel) Severity: Moderate Severity Actionability: Highly actionable Notes: Activities in the intertidal areas can impact habitat and behavior.	2
Class	Bivalvia (Marine And Freshwater Molluscs)	SGCN Category
	Species: <i>Zirfaea crispata</i> (Atlantic Great Piddock) Severity: Severe Actionability: Actionable with difficulty Notes: Large-scale, commercial trawling causes ecosystem degradation reducing population size and subsequently results in local extinctions, impaired role of the functional group "suspension feeders." Large-scale incidental catch contributes to these effects. Likelihood is high (high certainty) and large scale (throughout the region where this species occurs). Actionability is low for incidental catch.	2
Class	Chondrichthyes (Sharks, Rays, And Skates)	SGCN Category
	Species: <i>Dipturus laevis</i> (Barndoor Skate) Severity: Severe Actionability: Moderately actionable Notes: The barndoor skates (like other elasmobranchs) are highly vulnerable to exploitation because of their k-selective life histories (i.e. slow growth rates, late maturity, low fecundity). Although this species is not directly targeted, it is commonly captured as bycatch in the multispecies trawl and scallop fisheries. Currently, the barndoor skate is prohibited from capture (in US waters) due low biomass levels. However this species is slowly recovering and at present is no longer considered overfished. To ensure the population does not decline again, is important to assess the short-term (immediate mortality) and long-term (post-lease mortality, physiological alteration and recovery time) impacts these fishing methods have on these species	2

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Class	<i>Chondrichthyes</i> (Sharks, Rays, And Skates)	SGCN Category
Species: <i>Lamna nasus</i> (Porbeagle)		2
Severity: Severe	Actionability: Moderately actionable	
Notes:	The porbeagle sharks (like other elasmobranchs) are highly vulnerable to exploitation because of their k-selective life histories (i.e. slow growth rates, late maturity, low fecundity). The main threat to this shark is unsustainable fisheries both targeted (ie. longline, gillnet, driftnet fisheries) and bycatch (i.e. occurs in the tuna and swordfish fisheries). These fish are prized for their high value meat. As a result, porbeagle populations are seriously depleted and will require greatly reducing fishing mortality in order to recover. Currently this species is regulated under the highly migratory species act and fishing effort is controlled through license limitations. In addition, finning has also been banned. As such, it's important to continue to assess how commercial fisheries are impacting these sharks, so practices can continue to be altered to prevent this species from being overexploited.	
Species: <i>Isurus oxyrinchus</i> (Shortfin Mako)		2
Severity: Severe	Actionability: Moderately actionable	
Notes:	The mako sharks (like other elasmobranchs) are highly vulnerable to exploitation because of their k-selective life histories (i.e. slow growth rates, late maturity, low fecundity). Because of its flesh this shark is a highly sought after commercial species. Commercial captures are typically made using longlines, stationary gill nets and drift nets. The fins and liver oil are also marketed. In addition, they are a major bycatch component of tuna and swordfish fisheries. As a result, the U.S. National Marine Fisheries Service (NMFS) has included the shortfin mako on their list of managed pelagic sharks. The NMFS has reduced the number of commercial shortfin mako catches allowed per year by 50% in an attempt to counteract its declining numbers. As such, it's important to continue to assess how commercial fisheries are impacting these sharks so practices can continue to be altered to prevent this species from being overexploited.	
Species: <i>Malacoraja senta</i> (Smooth Skate)		2
Severity: Severe	Actionability: Moderately actionable	
Notes:	The smooth skates (like other elasmobranchs) are highly vulnerable to exploitation because of their k-selective life histories (i.e. slow growth rates, late maturity, low fecundity). Although this species is not directly targeted, it is commonly captured as bycatch in the multispecies trawl and bottom gillnet fishery. Currently, the smooth skate is prohibited from capture (in US waters) due to low biomass levels and overfishing is believed to be occurring. To ensure the population does not decline again, is important to assess the short-term (immediate mortality) and long-term (post-lease mortality, physiological alteration and recovery time) impacts these fishing methods have on these species	
Species: <i>Amblyraja radiata</i> (Thorny Skate)		2
Severity: Severe	Actionability: Moderately actionable	
Notes:	The thorny skate (like other elasmobranchs) are highly vulnerable to exploitation because of their k-selective life histories (i.e. slow growth rates, late maturity, low fecundity). Although this species is not directly targeted, it is commonly captured as bycatch in the multispecies trawl and bottom gillnet fisheries. Currently, the thorny skate is prohibited from capture (in US waters) due to low biomass levels. Interestingly, despite their prohibited status, populations have continued to decrease. Currently, discard mortality rates in the trawl fishery have been investigated for thorny skates and were reported to be moderate. To ensure the population does not decline further it's essential to continue to assess their physiological tolerance levels and ability to recover from fishing capture. In addition, it is also important to assess the impacts (i.e. bycatch rates) in the gillnet fishery.	

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Class	<i>Chondrichthyes</i> (Sharks, Rays, And Skates)	SGCN Category
Species: <i>Leucoraja ocellata</i> (Winter Skate)		2
Severity: Severe	Actionability: Moderately actionable	
Notes:	The winter skates (like other elasmobranchs) are highly vulnerable to exploitation because of their k-selective life histories (i.e. slow growth rates, late maturity, low fecundity). Currently, there is a directed (i.e. wing fishery) and indirect fishery (captured as bycatch within the multispecies trawl, bottom gillnet and scallop fishery) for this species. To ensure the winter skate population remains sustainable, it is important to continue to assess the impacts these fishing methods have on this species. Currently, discard mortality rates in the trawl fishery have been investigated for winter skates and were reported to be low. However this information should be obtained for other commercial fisheries, to determine what augmentations should be made to ensure a sustainable population	
Class	<i>Echinoidea</i> (Sea Urchins)	SGCN Category
Species: <i>Strongylocentrotus droebachiensis</i> (Green Sea Urchin)		2
Severity: Severe	Actionability: Moderately actionable	
Notes:	Maine's sea urchin stock has been significantly over-fished. The threat of over-fishing is highly certain and highly likely (occurred in recent years). However, reductions in fishing pressure have only been effective in stabilizing or recovering the stock in some regions. Other regions are showing no signs of recovery despite no fishing in more than 10 years. Other actions, such as reseedling, hold promise but will be difficult to implement.	
Class	<i>Gastropoda</i> (Aquatic And Terrestrial Snails)	SGCN Category
Species: <i>Arrhoges occidentalis</i> (American Pelican Foot)		2
Severity: Severe	Actionability: Highly actionable	
Notes:	Large-scale, unintentional catch by commercial trawling reduces population size and subsequently results in local extinctions, impaired role of the functional group "suspension feeders." Likelihood is high (high certainty) and large scale (throughout the region where this species occurs). Actionability is low for incidental catch. Intentional collection by aquarium trade leads to significant population reductions with similar effects. Likelihood is high (high certainty) and small-scale so actionability is high.	
Species: <i>Boreotrophon clathratus</i> (Clathrate Trophon)		2
Severity: Severe	Actionability: Highly actionable	
Notes:	Large-scale, unintentional catch by commercial trawling reduces population size and subsequently results in local extinctions, impaired role of the functional group "predator," and subsequently results in decreased benthic diversity through trophic cascades and thus decreases the availability of food for other species. Large-scale incidental catch contributes to these effects. Likelihood is high (high certainty) and large scale (throughout the region where this species occurs). Actionability is low for incidental catch.	
Species: <i>Colus pygmaeus</i> (Colus Snail)		2
Severity: Severe	Actionability: Highly actionable	
Notes:	Large-scale, unintentional catch by commercial trawling reduces population size and subsequently results in local extinctions, impaired role of the functional group "predator," and subsequently results in decreased benthic diversity through trophic cascades and thus decreases the availability of food for other species. Large-scale incidental catch contributes to these effects. Likelihood is high (high certainty) and large scale (throughout the region where this species occurs). Actionability is low for incidental catch.	

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Class	<i>Gastropoda</i> (Aquatic And Terrestrial Snails)	SGCN Category
Species: <i>Boreotrophon truncatus</i> (Murex)		2
Severity: Severe	Actionability: Highly actionable	
Notes:	Large-scale, unintentional catch by commercial trawling reduces population size and subsequently results in local extinctions, impaired role of the functional group "predator," and subsequently results in decreased benthic diversity through trophic cascades and thus decreases the availability of food for other species. Large-scale incidental catch contributes to these effects. Likelihood is high (high certainty) and large scale (throughout the region where this species occurs). Actionability is low for incidental catch.	
Species: <i>Ptychotractus ligatus</i> (Spindle Shell)		2
Severity: Severe	Actionability: Highly actionable	
Notes:	Large-scale, unintentional catch by commercial trawling reduces population size and subsequently results in local extinctions, impaired role of the functional group "predator," and subsequently results in decreased benthic diversity through trophic cascades and thus decreases the availability of food for other species. Large-scale incidental catch contributes to these effects. Likelihood is high (high certainty) and large scale (throughout the region where this species occurs). Actionability is low for incidental catch. Intentional collection by aquarium trade leads to significant population reductions with similar effects. Likelihood is high (high certainty) and small-scale so actionability is high.	
Class	<i>Holothuroidea</i> (Sea Cucumbers)	SGCN Category
Species: <i>Cucumaria frondosa</i> (Orange-footed Sea Cucumber)		2
Severity: Moderate Severity	Actionability: Highly actionable	
Notes:	Maine's sea cucumber stock has probably been over-fished, but lacks a formal assessment. The threat of over-fishing is moderately certain, moderately likely, and probably spatially patchy. However, significant reductions in fishing pressure have occurred recently (2013, 2014). More information is needed to understand the relationships between fishing and stock abundance.	
Species: <i>Psolus fabricii</i> (Psolus)		2
Severity: Moderate Severity	Actionability: Actionable with difficulty	
Notes:	Unintentional catch by commercial bottom trawling reduces population size and subsequently results in local extinctions facilitated by low growth rates, impaired role of the functional group "suspension feeders."	
Species: <i>Psolus phantapus</i> (Psolus)		2
Severity: Moderate Severity	Actionability: Moderately actionable	
Notes:	Unintentional catch by commercial bottom trawling reduces population size and subsequently results in local extinctions facilitated by low growth rates, impaired role of the functional group "suspension feeders."	
Species: <i>Thyonidium drummondii</i> (Sea Cucumber)		2
Severity: Severe	Actionability: Moderately actionable	
Notes:	Unintentional catch by commercial bottom trawling reduces population size and subsequently results in local extinctions facilitated by low growth rates, impaired role of the functional group "suspension feeders."	
Class	<i>Malacostraca</i> (Crustaceans)	SGCN Category

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Class	<i>Malacostraca</i> (Crustaceans)	SGCN Category
Species: <i>Pandalus borealis</i> (Northern Shrimp)		1
Severity: Moderate Severity	Actionability: Highly actionable	
Notes: Recent (2010-2012) state-wide catch levels have been higher than those recommended by ASMFC scientists. Regulations have been implemented to close fisheries (in 2014 and 2015). The fishing effect is difficult to measure because of other stressors, but in past years, the likelihood of over-fishing impacting the stock was likely; certainty was moderate; and the spatial extent was pervasive (state-wide (coastal)).		
Species: <i>Lebbeus polaris</i> (Polar Lebbeid Shrimp)		2
Severity: Severe	Actionability: Highly actionable	
Notes: Unintentional catch by commercial trawling reduces population size and subsequently results in local extinctions, impaired role of the functional group "predator," and subsequently results in decreased benthic diversity through trophic cascades and thus decreases the availability of food for other species.		
Species: <i>Lebbeus groenlandicus</i> (Spiny Lebbeid Shrimp)		2
Severity: Severe	Actionability: Actionable with difficulty	
Notes: Unintentional catch by commercial trawling reduces population size and subsequently results in local extinctions, impaired role of the functional group "predator," and subsequently results in decreased benthic diversity through trophic cascades and thus decreases the availability of food for other species.		
Class	<i>Mammalia</i> (Mammals)	SGCN Category
Species: <i>Balaenoptera musculus</i> (Blue Whale)		2
Severity: Moderate Severity	Actionability: Highly actionable	
Notes: Large whales, namely the right and humpback whale, are being taken in too large of numbers as bycatch in fixed gear fisheries as a result of entanglements in rope. This issue is at the center of an evolving Atlantic Large Whale Take Reduction Plan to mitigate the risk, but large data gaps exist and entanglement rates are not decreasing.		
Species: <i>Balaenoptera physalus</i> (Finback Whale)		2
Severity: Severe	Actionability: Highly actionable	
Notes: Large whales, namely the right and humpback whale, are being taken in too large of numbers as bycatch in fixed gear fisheries as a result of entanglements in rope. This issue is at the center of an evolving Atlantic Large Whale Take Reduction Plan to mitigate the risk, but large data gaps exist and entanglement rates are not decreasing.		
Species: <i>Megaptera novaeangliae</i> (Humpback Whale)		1
Severity: Severe	Actionability: Highly actionable	
Notes: Large whales, namely the right and humpback whale, are being taken in too large of numbers as bycatch in fixed gear fisheries as a result of entanglements in rope. This issue is at the center of an evolving Atlantic Large Whale Take Reduction Plan to mitigate the risk, but large data gaps exist and entanglement rates are not decreasing.		
Species: <i>Eubalaena glacialis</i> (North Atlantic Right Whale)		1
Severity: Severe	Actionability: Highly actionable	
Notes: Large whales, namely the right and humpback whale, are being taken in too large of numbers as bycatch in fixed gear fisheries as a result of entanglements in rope. This issue is at the center of an evolving Atlantic Large Whale Take Reduction Plan to mitigate the risk, but large data gaps exist and entanglement rates are not decreasing.		

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Class	<i>Mammalia</i> (Mammals)	SGCN Category
Species: <i>Balaenoptera borealis</i> (Sei Whale)		2
Severity: Moderate Severity	Actionability: Highly actionable	
Notes: Large whales, namely the right and humpback whale, are being taken in too large of numbers as bycatch in fixed gear fisheries as a result of entanglements in rope. This issue is at the center of an evolving Atlantic Large Whale Take Reduction Plan to mitigate the risk, but large data gaps exist and entanglement rates are not decreasing.		
Species: <i>Physeter macrocephalus</i> (Sperm Whale)		2
Severity: Moderate Severity	Actionability: Highly actionable	
Notes: Large whales, namely the right and humpback whale, are being taken in too large of numbers as bycatch in fixed gear fisheries as a result of entanglements in rope. This issue is at the center of an evolving Atlantic Large Whale Take Reduction Plan to mitigate the risk, but large data gaps exist and entanglement rates are not decreasing.		
Class	<i>Merostomata</i> (Horseshoe Crabs And Sea Scorpions)	SGCN Category
Species: <i>Limulus polyphemus</i> (Horseshoe Crab)		1
Severity: Severe	Actionability: Highly actionable	
Notes: Unintentional catch by commercial trawling reduces population size and subsequently results in local extinctions, impaired role of the functional group "predator," and subsequently results in decreased benthic diversity through trophic cascades and thus decreases the availability of food for other species. Small-scale intentional catch for bait, biomedical products and research causes local population reductions		
Class	<i>Ophiuroidea</i> (Brittle Stars)	SGCN Category
Species: <i>Gorgonocephalus arcticus</i> (Northern Basket Starfish)		2
Severity: Moderate Severity	Actionability: Moderately actionable	
Notes: Unintentional by-catch by commercial bottom trawling reduces population size and subsequently results in decreased benthic diversity and functional group "suspension feeders" and impaired commensal associations with soft corals. Intentional collection by aquarium trade leads to significant population reductions with similar effects.		
Class	<i>Reptilia</i> (Reptiles)	SGCN Category
Species: <i>Emydoidea blandingii</i> (Blanding's Turtle)		1
Severity: Moderate Severity	Actionability: Moderately actionable	
Notes: Poaching and incidental collection		
Species: <i>Chelonia mydas</i> (Green Seaturtle)		2
Severity: Severe	Actionability: Highly actionable	
Notes: Sea turtles are at risk as bycatch in mobile gear, gillnets, and fixed gear. DMR keeps records of turtle/fishing gear entanglements.		
Species: <i>Lepidochelys kempii</i> (Kemp's Ridley Seaturtle)		2
Severity: Severe	Actionability: Highly actionable	
Notes: DMR keeps records of turtle/fishing gear entanglements. Sea turtles are at risk as bycatch in mobile gear, gillnets, and fixed gear.		

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Class	<i>Reptilia</i> (Reptiles)	SGCN Category
Species: <i>Dermochelys coriacea</i> (Leatherback Seaturtle)		1
Severity: Severe	Actionability: Highly actionable	
Notes: DMR keeps records of turtle/fishing gear entanglements. This threat is widely documented in new england waters including gulf of ME as well as Nova Scotia. Sea turtles are at risk as bycatch in mobile gear, gillnets, and fixed gear.		
Species: <i>Caretta caretta</i> (Loggerhead Seaturtle)		2
Severity: Severe	Actionability: Moderately actionable	
Notes: DMR keeps records of turtle/fishing gear entanglements. Sea turtles are at risk as bycatch in mobile gear, gillnets, and fixed gear.		
Species: <i>Clemmys guttata</i> (Spotted Turtle)		1
Severity: Severe	Actionability: Moderately actionable	
Notes: Poaching and incidental collection		
Species: <i>Glyptemys insculpta</i> (Wood Turtle)		1
Severity: Severe	Actionability: Moderately actionable	
Notes: Poaching and incidental collection		

Class	<i>Rhynchonellata</i> (Brachiopods)	SGCN Category
Species: <i>Terebratulina septentrionalis</i> (Lamp Shell)		2
Severity: Severe	Actionability: Highly actionable	
Notes: Large-scale, unintentional catch by commercial trawling reduces population size and subsequently results in local extinctions, impaired role of the functional group "suspension feeders." Likelihood is high (high certainty) and large scale (throughout the region where this species occurs). Actionability is low for incidental catch. Intentional collection by aquarium trade leads to significant population reductions with similar effects. Likelihood is high (high certainty) and small-scale so actionability is high.		

Habitats Associated With This Stressor:

Macrogroup	Intertidal Bedrock
Habitat System Name: High Intertidal	
Notes: Harvesting of species in this habitat or accessing subtidal fishing areas by traveling over this habitat	
Habitat System Name: Low-Intertidal	
Notes: Harvesting of species in this habitat or accessing subtidal fishing areas by traveling over this habitat	
Habitat System Name: Mid-Intertidal	
Notes: Harvesting of species in this habitat or accessing subtidal fishing areas by traveling over this habitat	
Macrogroup	Intertidal Gravel Shore
Habitat System Name: High Intertidal	
Notes: Harvesting of species in this habitat or accessing subtidal fishing areas by traveling over this habitat	
Habitat System Name: Lower Intertidal	
Notes: Harvesting of species in this habitat or accessing subtidal fishing areas by traveling over this habitat	
Habitat System Name: Mid-Intertidal	
Notes: Harvesting of species in this habitat or accessing subtidal fishing areas by traveling over this habitat	
Macrogroup	Intertidal Mollusc Reefs

SGCN and Habitat Stressors

Level 1 Threat Biological Resource Use

Level 2 Threat: Fishing and Harvesting of Aquatic Resources

Macrogroup Intertidal Mollusc Reefs

Habitat System Name: Gastropod Reef

Notes: Can result in habitat disturbance, reef destruction, and can introduce disease and non-native species

Habitat System Name: Mussel Reef

Notes: Can result in habitat disturbance, reef destruction, and can introduce disease and non-native species

Habitat System Name: Oyster Reef

Notes: Can result in habitat disturbance, reef destruction, and can introduce disease and non-native species

Macrogroup Intertidal Mudflat

Habitat System Name: Freshwater Tidal Marsh

Notes: In combination with the natural stressors, harvesting resources can stress some species and the mudflat environment; these impacts can affect the target and non-target species (e.g. clammers and worms)

Habitat System Name: Non-Vascular Mudflat

Notes: In combination with the natural stressors, harvesting resources can stress some species and the mudflat environment; these impacts can affect the target and non-target species (e.g. clammers and worms)

Habitat System Name: Submerged Aquatic Vegetation

Notes: In combination with the natural stressors, harvesting resources can stress some species and the mudflat environment; these impacts can affect the target and non-target species (e.g. clammers and worms)

Macrogroup Intertidal Water Column

Habitat System Name: Confined Channel

Notes: Some methods of fishing are not species specific and result in mortality of bycatch and disruptions in natural communities

Habitat System Name: Embayment

Notes: Some methods of fishing are not species specific and result in mortality of bycatch and disruptions in natural communities

Habitat System Name: Exposed Shore

Notes: Some methods of fishing are not species specific and result in mortality of bycatch and disruptions in natural communities

Macrogroup Subtidal Bedrock Bottom

Habitat System Name: Bedrock

Notes: Fishing for demersal fish species, scallops, etc; dragging may alter benthic habitat; overfishing is also an issue in some cases

Habitat System Name: Erect Epifauna

Notes: Fishing for demersal fish species, scallops, etc; dragging may alter benthic habitat; overfishing is also an issue in some cases

Habitat System Name: Kelp Bed

Notes: Fishing for demersal fish species, scallops, etc; dragging may alter benthic habitat; overfishing is also an issue in some cases

Macrogroup Subtidal Coarse Gravel Bottom

Habitat System Name: Coarse Gravel

Notes: Fishing for demersal fish species, scallops, etc; dragging may alter benthic habitat; overfishing is also an issue in some cases

Habitat System Name: Erect Epifauna

Notes: Fishing for demersal fish species, scallops, etc; dragging may alter benthic habitat; overfishing is also an issue in some cases

SGCN and Habitat Stressors

Level 1 Threat Biological Resource Use

Level 2 Threat: Fishing and Harvesting of Aquatic Resources

Macrogroup Subtidal Coarse Gravel Bottom

Habitat System Name: Kelp Bed

Notes: Fishing for demersal fish species, scallops, etc; dragging may alter benthic habitat; overfishing is also an issue in some cases

Macrogroup Subtidal Mollusc Reefs

Habitat System Name: Gastropod Reef

Notes: Fishing for demersal fish species, scallops, etc; dragging may alter benthic habitat; overfishing is also an issue in some cases

Habitat System Name: Mussel Reef

Notes: Fishing for demersal fish species, scallops, etc; dragging may alter benthic habitat; overfishing is also an issue in some cases

Habitat System Name: Oyster Reef

Notes: Fishing for demersal fish species, scallops, etc; dragging may alter benthic habitat; overfishing is also an issue in some cases

Macrogroup Subtidal Mud Bottom

Habitat System Name: Submerged Aquatic Vegetation

Notes: Fishing for demersal fish species, scallops, etc; dragging may alter benthic habitat; overfishing is also an issue in some cases

Habitat System Name: Unvegetated

Notes: Fishing for demersal fish species, scallops, etc; dragging may alter benthic habitat; overfishing is also an issue in some cases

Macrogroup Subtidal Pelagic (Water Column)

Habitat System Name: Confined Channel

Notes: Fishing for pelagic species often produces a large amount of bycatch. Large pelagic predators inhabit this ecosystem. Their removal in high numbers can lead to large scale trophic changes.

Habitat System Name: Nearshore

Notes: Fishing for pelagic species often produces a large amount of bycatch. Large pelagic predators inhabit this ecosystem. Their removal in high numbers can lead to large scale trophic changes.

Habitat System Name: Offshore

Notes: Fishing for pelagic species often produces a large amount of bycatch. Large pelagic predators inhabit this ecosystem. Their removal in high numbers can lead to large scale trophic changes.

Habitat System Name: Upwelling Zones

Notes: Fishing for pelagic species often produces a large amount of bycatch. Large pelagic predators inhabit this ecosystem. Their removal in high numbers can lead to large scale trophic changes.

Macrogroup Subtidal Sand Bottom

Habitat System Name: Submerged Aquatic Vegetation

Notes: Fishing for demersal fish species, scallops, etc; dragging may alter benthic habitat; overfishing is also an issue in some cases

Habitat System Name: Unvegetated

Notes: Fishing for demersal fish species, scallops, etc; dragging may alter benthic habitat; overfishing is also an issue in some cases

SGCN and Habitat Stressors

Level 1 Threat Biological Resource Use

Level 2 Threat: Fishing and Harvesting of Aquatic Resources

The Wildlife Action Plan was developed through a lengthy participatory process with state agencies, targeted conservation partners, and the general public. The Plan is non-regulatory. The species, stressors, and voluntary conservation actions identified in the Plan complement, but do not replace, existing work programs and priorities by state agencies and partners.